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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,412	09/30/2003	Ming-Shun Yang	BHT-3245-5	2685

7590 02/01/2007
BRUCE H. TROXELL
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5205 LEESBURG PIKE
FALLS CHURCH, VA 22041

EXAMINER

COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/673,412

Applicant(s)

YANG, MING-SHUN

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 29-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application
- ☐ Other: ____

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/3/06 has been entered.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al, U.S. Patent No. 6,100,208 in view of Roe et al, U.S. Patent No. 5,834,381. Brown discloses a protective fabric which may comprise first and second nonwoven outer layers and a water impermeable, vapor permeable center layer. See abstract. The first and second nonwoven outer layers may comprise bicomponent fibers and may further comprise polyolefins, polyamides and polyesters. See col. 7, lines 54-56. The water impermeable, vapor permeable center layer may comprise polyurethane films, (col. 9, line 64) as well as polyolefin films such as polyethylene and polypropylene films, (col. 10, lines 7-22). The layers may be bonded by ultrasonic bonding, thermal point bonding and/or adhesive bonding. See col. 11, lines 29-33. Brown teaches that the

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fabric may comprise additional outer and/or inter layers, but differs from the claimed invention because it does not specifically teach employing a woven or knitted layer in conjunction with the center barrier layer. Roe et al teaches that both woven and knitted reinforcements, (col. 3, lines 58-65), may be used in forming protective materials which comprise a polymeric film layers in order to reinforce the films and produce a fabric having improved tear resistance. See col. 1, line 66 – col. 2, line 15. The reinforcing fabrics can be nylon, (polyamide). See col. 2, lines 31-39. The polyurethane resin of the film layers would necessarily coat the fibers of the reinforcing fabric after the layers and the reinforcing fabric were united by means of heat and pressure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a reinforcing fabric layer within the central layer of Brown et al. One of ordinary skill in the art would have been motivated to include the central reinforcing fabric layer by the expectation that this would improve the strength and tear resistance of the Brown fabric as taught by Roe. Since the

3. Applicant's arguments filed 11/3/06 have been fully considered but they are not persuasive. Applicant argues that Brown does not teach a central layer comprising a woven fabric coated with a vapor permeable, water impermeable polyurethane resin. However, Brown teaches that the center layer can be a barrier layer which prevents the passage of water but is breathable to water vapor and that the layer can comprise films foam, non-porous films, microporous films and microporous nonwovens, and Brown teaches the use of polyurethane films which are permeable to vapor but impermeable to liquid water.

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4. Applicant argues that Roe teaches a tri-laminate fabric but does not teach that the polyurethane resin coats the fibers. However, since the woven layer is bonded to the polyurethane layers by heat and pressure, the polyurethane resin which makes up the polyurethane films of Roe would necessarily coat the fibers of the nylon reinforcing fabric, at least at those areas where the bonding occurs.

5. Applicant argues that the examiner has improperly picked and chosen among the references and that there is no motivation to combine the references. However, Brown teaches everything claimed except it does not teach that the central polyurethane layer comprises a woven polyamide fiber reinforcement. Roe teaches employing woven and knitted layers to reinforce polyurethane films which are used as protective layers in order to reinforce the films. Since Brown also teaches using polyurethane films in such fabrics, the motivation to combine the two references is found in the Roe patent which teaches that adding a woven or knitted layer improves the strength and tear resistance of the fabrics.

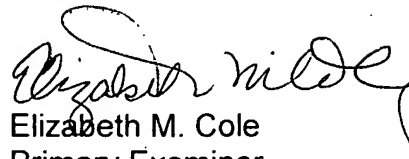
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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The fax number for all official faxes is (571) 273-8300.

A handwritten signature in black ink, appearing to read "Elizabeth M. Cole", is written over the printed name.

Elizabeth M. Cole
Primary Examiner
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e.m.c